



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application of

David Jaramillo et al.

Application No.: 10/574,995

Filed: April 6, 2006

For: SEQUENCE SELECTIVE PYRROLE
AND IMIDAZOLE POLYAMIDE
METALLOCOMPLEXES

) MAIL STOP IDS

) Group Art Unit:

) Examiner:

) Confirmation No.:

) Certificate of Mailing

) I hereby certify that this correspondence is being
) deposited with the United States Postal Service on May
12, 2006 as first class mail, in an envelope addressed
to: Mail Stop IDS, Commissioner for Patents, P.O. Box
1450, Alexandria, VA 22313-1450.) By: Kim A. Cabello

Kim A. Cabello

FIRST INFORMATION DISCLOSURE STATEMENT

MAIL STOP IDS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003 waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

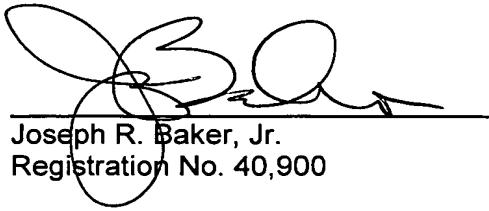
The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b), no fee or statement is required.

FIRST Information Disclosure Statement
Application No. 10/574,995
Attorney's Docket No. 1034381-000012
Page 2

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL PC

By: 
Joseph R. Baker, Jr.
Registration No. 40,900

Date May 12, 2006

12230 El Camino Real
Suite 300
San Diego, CA 92130-2090
(858) 509-7300

Buchanan Ingersoll PC
ATTORNEYS

Including attorneys from **Burns Doane Swecker & Mathis**



Patent
Attorney Docket No. 1034381-000012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

David Jaramillo et al.

Application No.: 10/574,995

Filing Date: April 6, 2006

Title: SEQUENCE SELECTIVE PYRROLE AND IMIDAZOLE POLYAMIDE METALLOCOMPLEXES

Group Art Unit:

Examiner:

Confirmation No.:

FIRST
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a First Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- No additional fee for submission of an IDS is required.
- The fee of _____ as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- A statement under 37 C.F.R. § 1.97(e), and the fee of _____ as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- Charge _____ to Deposit Account No. 02-4800 for the fee due.
- A check in the amount of _____ is enclosed for the fee due.
- Charge _____ to credit card. Form PTO-2038 is attached.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL PC

By

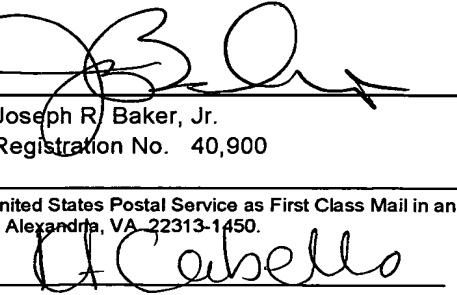
Joseph R. Baker, Jr.
Registration No. 40,900

P.O. Box 1404
Alexandria, Virginia 22313-1404
(858) 509-7300

Date: May 12, 2006

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Deposit: May 12, 2006


Kim A. Cabello
Typed Name:

**FIRST
INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

1

of

149B
1 MAY 18 2006
PATENT & TRADEMARK OFFICE

Complete if Known

Application Number	10/574,995
Filing Date	April 6, 2006
First Named Inventor	David Jaramillo et al.
Examiner Name	

Attorney Docket Number 1034381-000012

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	4,942,227		Dervan	06/17/1990

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec
	WO 98/49142	A1	WIPO	11/05/1999				X			
	WO 03/041128	A2	WIPO	05/15/2003				X			
	WO 99/62551	A1	WIPO	12/09/1999				X			
	WO 03/020877	A2	WIPO	08/15/2002				X			

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	BARALDI, Pier Giovanni; et al. "Design, Synthesis and in vitro Cytotoxicity of a cis-Dichloplatinum (II) Complex Linked to the Minor Groove Binder Stallimycin" (2003) Drug Res. 53, No. 2, 107-113
	BELITSKY, Jason M. et al., "Cellular Uptake of N-Methylpyrrole/N-Methylimidazole Polyamide-Dye Conjugates, Bioorganic & Medicinal Chemistry 10 (2002) 3313-3318
	PITIE, Marguerite, et al. "Mechanisms of DNA Cleavage by Copper Complexes of 3-Clip-Phen and of its Conjugate with a Distamycin Analogue" Nucleic Acids Research, 2000, Vol. 28, No. 24. 4856 - 4864
	LOSKOTOVA, Hana and Viktor Brabek, "DNA interations of cisplatin tethered to the DNA minor groove binder distamycin" Eur. J. Biochem (1999) 266, 392-402
	SWALLEY, Suzanne E. et al., Effects of γ -Turn and β -Tail Amino Acids on Sequence Specific Recognition of DNA by Hairpin Polyamides" J. of the American Chemical Society (1999) Vol. 121, No. 6, 1113-1120
	LEE, Moses et al., "Novel Platinum (II) Derivatives of Analogues of Netropsin and Distamycin Synthesis, DNA Binding and Cytotoxic Properties" Med. Chem. Res. (1996) 365-371
	SIGURDSSON, Snorri Th. And Paul B. Hopkins "Synthesis and Reactions with DNA of a Family of DNA-DNA Affinity Cross-Linking Agents" (1994) Tetrahedron, Vol. 50, No. 42 12065-12084
	HUANG, Liren et al., "Design of DNA-Cleaving Molecules Which Incorporate a Simplified Metal-Complexing Moiety of Bleomycin and Lexitropsin Carriers" Bioorganic & Medicinal Chemistry Letters, Vo. 3, No. 8, 1751-1756

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/001368

A. CLASSIFICATION OF SUBJECT MATTER																						
Int. Cl. 7: C07D 207/34, 209/56, 233/90; A61K 31/4164, 31/40; A61P 35/00, 31/18, 31/12																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
B. FIELDS SEARCHED																						
Minimum documentation searched (classification system followed by classification symbols)																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) STN CAS-Online: substructure search																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
X	WO 1998/049142 A1 (CARLIFORNIA INSTITUTE OF TECHNOLOGY) 5 November 1998 See whole document	13, 17-20																				
X	WO 2003/041128 A2 (PHARMACIA CORPORATION) 15 May 2003 See whole document	13, 17-20																				
X	US 4942227 (DERVAN et al) 17 July 1990 See whole document, especially, columns 87-90	13																				
X	WO 1999/062551 A1 (BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM) 9 December 1999 See whole document, especially pages 31-34	13, 17-20																				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C		<input checked="" type="checkbox"/> See patent family annex																				
<p>* Special categories of cited documents:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; vertical-align: top; padding: 2px;">"A"</td> <td style="width: 20%; vertical-align: top; padding: 2px;">document defining the general state of the art which is not considered to be of particular relevance</td> <td style="width: 20%; vertical-align: top; padding: 2px;">"T"</td> <td style="width: 40%; vertical-align: top; padding: 2px;">later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">"B"</td> <td style="vertical-align: top; padding: 2px;">earlier application or patent but published on or after the international filing date</td> <td style="vertical-align: top; padding: 2px;">"X"</td> <td style="vertical-align: top; padding: 2px;">document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">"L"</td> <td style="vertical-align: top; padding: 2px;">document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td style="vertical-align: top; padding: 2px;">"Y"</td> <td style="vertical-align: top; padding: 2px;">document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">"O"</td> <td style="vertical-align: top; padding: 2px;">document referring to an oral disclosure, use, exhibition or other means</td> <td style="vertical-align: top; padding: 2px;">"&"</td> <td style="vertical-align: top; padding: 2px;">document member of the same patent family</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">"P"</td> <td style="vertical-align: top; padding: 2px;">document published prior to the international filing date but later than the priority date claimed</td> <td colspan="2"></td> </tr> </table>			"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"B"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention																			
"B"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone																			
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art																			
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family																			
"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 3 December 2004		Date of mailing of the international search report 14 DEC 2004																				
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer O.L. CHAI Telephone No : (02) 6283 2482																				

INTERNATIONAL SEARCH REPORT

 International application No.
 PCT/AU2004/001368

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2003/020877 A2 (PHARMACIA CORPORAON) 13 March 2003 See whole document, especially Example XVII, pages 12, 90, 91	13
X	BARALDI P G et al, "Design, synthesis and in vitro cytotoxicity of a cis-dichloroplatinum (II) complex linked to the minor groove binder stallimycin" Arzneimittel-Forschung (2003), 53(2), 107-113 See abstract, structural formulae at page 108, Scheme 1 (compounds 10,11)	13
X	Belitsky, Jason M et al, "Cellular uptake of N-methylpyrrole/N-methylimidazole polyamide-dye conjugates" Bioorganic & Medicinal Chemistry (2002), 10(10), 3313-3318 See Figure 1	13, 17-20
X	Pitie, Marguerite et al, "Mechanisms of DNA cleavage by copper complexes of 3-Clip-Phen and of its conjugate with a distamycin analogue" Nucleic Acids Research (2000), 28(24), 4856-4864 Copper complex of conjugates 1, 2 and 3 in Figure 1	13
X	Loskotova, Hana et al, "DNA interactions of cisplatin tethered to the DNA minor groove binder distamycin" European Journal of Biochemistry (1999), 266(2), 392-402 See Figure 1	13
X	Swalley, Susanne et al., "Effects of .gamma.-Turn and .beta.-Tail Amino Acids on Sequence-Specific Recognition of DNA by Hairpin Polyamides" Journal of the American Chemical Society (1999), 121(6), 1113-1120 See Figure 2	13
X	Lee, Moses et al, "Novel platinum(II) derivatives of analogs of netropsin and distamycin: synthesis, DNA binding and cytotoxic properties" Medicinal Chemistry Research (1996), 6(6), 365-371 See abstract and Figure 2	13, 17-20
X	Sugurdsson, Snorri Th. et al, "Synthesis and reactions with DNA of a family of DNA-DNA affinity crosslinking agents" Tetrahedron (1994), 50(42), 12065-84 See scheme 1, compounds 1-3 cross linked to distamycin	13
X	Huang, Liren et al, "Design of DNA-cleaving molecules which incorporate a simplified metal-complexing moiety of bleomycin and lexitropsin carriers" Bioorganic & Medicinal Chemistry Letters (1993), 3(8), 1751-6 See scheme 4, Fe(II)-hybrid complexes	13
X	Youngquist, R. Scott et al, "A synthetic peptide binds 16 base pairs of A,T double helical DNA" Journal of the American Chemical Society (1987), 109(24), 7564-6 See Figure 2	13

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001368

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	1998049142	AU	25268/97	AU	37347/97
		AU	61517/98	AU	61588/98
		AU	64334/98	AU	64341/98
		AU	71040/98	CA	2247889
		CA	2280806	CA	2281843
		CA	2281947	CA	2281948
		CA	2288806	CA	2299455
		EP	0885189	EP	0958508
		EP	0968186	EP	0973740
		EP	0986539	EP	0991417
		EP	1023288	US	5998140
		US	6090947	US	6143901
		US	6472537	US	6506906
		US	6555692	US	6635417
		US	6683189	WO	1997030975
		WO	1998035702	WO	1998037066
		WO	1998037087	WO	1998045284
		WO	1998050582	WO	1998050058
WO	2003041128	CA	2465886	EP	1451856
US	4942227	US	4529401	US	4665184
WO	1999062551	AU	42321/99	CA	2334809
		NO	20006155	US	6207660
WO	2003020877	NIL			

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX